

Applicant : Xiaoli Fu, et al.  
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Attorney's Docket No.: 13854-067001

### REMARKS

Claims 1-19 and 21-29 are currently pending. Claims 12-15 were previously withdrawn. The Examiner has currently withdrawn claim 29. Claims 1, 4-7, 11, 16, and 21-22 are currently amended. No new matter is added. Reconsideration of the action mailed April 27, 2005, is requested in light of the foregoing amendments and the following remarks.

The Examiner rejected claims 16-28 under 35 U.S.C. § 112, second paragraph, as being indefinite. The Examiner rejected claims 1-7, 9, 11, 16-19, 21, 23-24, 26, and 28 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,804,467 to Colbourne et al. (hereinafter "Colbourne"). The Examiner rejected claims 8, 10, 25, and 27 under 35 U.S.C. § 103(a) as being unpatentable over Colbourne. The Applicant traverses the rejections.

The Examiner objected to claim 6 as failing to further limit the subject matter of the base claim (claim 1). Specifically, the Examiner states that claim one requires a "single polarization collimator" while claim 6 includes "one or more single polarization collimators." The term "single" in both claims emphasizes that the collimator provides a light signal having a single polarization and does not refer to the number of polarization collimators. Thus, a single polarization collimator receives an input light signal and polarizes the input light signal to provide an output light signal having a single polarization. However, for simplicity and to expedite prosecution, the Applicant has amended the claims to remove the term "single" from each instance of "single polarization collimator."

### **Section 112 Rejections**

Claim 16 stands rejected as being indefinite. Claims 27-28 stand rejected as being dependant from claim 16. The Examiner states that in claim 16, the phrase "the single polarization collimator coupled to the single polarization collimator" is unclear. The Applicant has amended claim 16 clarify the relationship between components. The Applicant respectfully submits that the rejection of claims 16 and 27-28 has been overcome.

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### Section 102 Rejections

Claim 1 stands rejected as anticipated by Colbourne. Claim 1 is directed to a dispersion compensation module that includes a polarization beam splitter positioned between a first reflection etalon and a second reflection etalon such that a light beam from the first reflection etalon passes, without reflection, through the polarization beam splitter to the second reflection etalon.

The Examiner states that Colbourne discloses the Applicant's claimed dispersion compensation module at FIG. 5. The Applicant respectfully disagrees. FIG. 5 of Colbourne discloses an implementation of dispersion compensator. *See* col. 7, lines 46-49. The dispersion compensator includes a polarization collimator, a birefringent crystal (y-beam displacer), a quarter-waveplate, an etalon, and a quarter-waveplate mirror combination. *See* FIG. 5; col. 10, lines 10-19. In operation, light input from the polarization collimator having a single polarization passes through the birefringent crystal without deflection. *See* col. 10, lines 11-12. After passing through the birefringent crystal, the light passes through the quarter-waveplate to the etalon. *See* col. 10, lines 12-13. The light is reflected from the etalon back through the quarter-waveplate so that the polarization of the light has been rotated a total of 90 degrees. *See* col. 10, lines 14-16. The light is then deflected by the birefringent crystal to the quarter-waveplate mirror combination. *See* col. 10, lines 17-19. The reflected light passes back through the birefringent crystal without deformation to the etalon. *See* col. 10, lines 19-24.

In another implementation, Colbourne substitutes the birefringent crystal for a polarization beam splitter array. *See* FIG. 7; col. 9, lines 60-63. In either case, however, a single long etalon is placed on one side of the birefringent crystal/polarization beam splitter array while a mirror is placed on the opposite side. *See* FIGS. 5-10. Thus, light beams in Colbourne must make two passes through the birefringent crystal/polarization beam splitter array for each pass through the etalon.

In contrast, the claimed dispersion compensation module includes a polarization beam splitter positioned between a first and a second etalon. A light beam exiting from the first etalon passes directly through the polarization beam splitter to the second etalon. Thus, unlike

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Colbourne, no reflection or deflection of light signals is required. Additionally, while Colbourne discloses a single long etalon upon which a light beam is incident multiple times, the claimed dispersion compensation module includes two distinct etalons on opposite sides of the polarization beam splitter. Colbourne does not disclose or suggest a dispersion compensation module that includes a polarization beam splitter positioned between a first reflection etalon and a second reflection etalon such that a light beam from the first reflection etalon passes, without reflection, through the polarization beam splitter to the second reflection etalon. Applicant respectfully submits that claim 1, as well as claims 2-10, which depend from claim 1, are in condition for allowance.

Claim 11 stands rejected as anticipated by Colbourne. Claim 11 is directed to a dispersion compensation module that includes a second reflection etalon positioned such that the polarization beam splitter is located between the first reflection etalon and the second reflection etalon and operable to apply a group delay profile to the optical signal output from the third port. For at least the reasons set forth above with respect to claim 1, claim 11 is in condition for allowance.

Claim 16 stands rejected as anticipated by Colbourne. Claim 16 is directed to a dispersion compensation module that includes first and second polarizers positioned between the first and second etalons such that an optical signal reflected from the first etalon passes, without reflection, through the first and second polarizers to the second etalon. Colbourne does not disclose or suggest positioning a first and second polarizer between a first and second etalon. For at least the reasons set forth above with respect to claim 1, claim 16 as well as claims 17-19 and 21-28, which depend from claim 16, are in condition for allowance.


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The Applicant respectfully requests that all pending claims be allowed. Please apply any charges or credits to deposit account 06-1050.

Respectfully submitted,

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